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# Correlations Between the Scores on the Two Paper-Based Versions of the MET and the Scores on the Two Versions of the MET Online with 3 Multiple Choice Questions

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## 1. Introduction

The Maki Group created the MET Online with two choice questions in 2020. Maki et al. (2022) examined whether there were statistically significant correlations between the scores on the two paper-based versions of the MET and the scores on the MET Online with two choice questions. The results showed that there were statistically significant correlations between the scores on the jMET/the MET 60 and the scores on the MET Online with two choice questions. See Maki et al. (2003), Maki (2010), Goto et al. (2010), Maki (2015) and Maki (2018) for details of the MET.

The Maki Group created several versions of the MET Online with 3 multiple choice questions. The purpose of this paper is to examine whether there would be statistically significant correlations between the scores on the two paper-based versions of the MET used in Maki et al. (2022) and the scores on the two versions of the MET Online with 3 multiple choice questions. Our hypothesis is (1), given the fact that the structures of the two types of the MET Online, namely, the two choice question type and the three multiple choice question type, are the same.

### (1) Hypothesis

There will be statistically significant correlations between the scores on the two paper-based versions of the MET (the jMET and the MET 60) and the scores on the two versions of the MET Online with 3 multiple choice questions.

The organization of this paper is as follows. Section 2 presents the research method of this study. Section 3 reports the results, and Section 4 discusses what the findings of this study might suggest for the MET-based research.

## 2. Method

In April of 2022, the jMET and the MET 60 were conducted to 34 freshmen at a university in Japan. These versions of the MET are paper-based. In June of 2022, the two versions of the MET Online with 3 multiple questions were conducted to the same 34 freshmen at the same university in Japan.

First, the jMET is shown in (2).

### (2) The jMET

1. I am Mary White. Are you from Canada? (        )<sup>1</sup>, I am.
2. This is John. This (        )<sup>2</sup> John's house.
3. This is a rabbit. This is (        )<sup>3</sup> animal.
4. Is this your book? No, (        )<sup>4</sup> isn't. My house is old.

5. What is ( )<sup>5</sup>? It is a bag. This isn't ( )<sup>6</sup> dog.
6. She can read English. Can ( )<sup>7</sup> play soccer?
7. Yes, he can. She cannot speak Japanese.
8. ( )<sup>8</sup> lives in the town. Did he ( )<sup>9</sup> in the house?
9. Yes, he did. ( )<sup>10</sup> went to the place yesterday. I didn't eat ( )<sup>11</sup>.
10. I lived in Boston. Did you enjoy the movie? ( )<sup>12</sup>, I did.
11. My uncle went to Boston ( )<sup>13</sup> month. My aunt doesn't understand English.
12. Which do you want, ( )<sup>14</sup> bike or the car?
13. Ms. Davis was ( )<sup>15</sup> to me. We were very happy.
14. ( )<sup>16</sup> was reading a book.
15. When she ( )<sup>17</sup> to my house, I was doing homework.
16. How ( )<sup>18</sup> you use the machine?
17. She likes singing foreign songs. You ( )<sup>19</sup> wearing caps, don't you?
18. I will ( )<sup>20</sup> you some flowers.
19. If you have ( )<sup>21</sup> questions, please talk with Mary. It sounds easy.
20. Is ( )<sup>22</sup> possible for me to use this ( )<sup>23</sup>?
21. We call him John. This made ( )<sup>24</sup> happy.
22. Fred was so unhappy that he didn't come ( )<sup>25</sup> school.
23. The book was too difficult to ( )<sup>26</sup>.
24. We had a plan that ( )<sup>27</sup> important to all people.
25. There were many things that ( )<sup>28</sup> could do.
26. She was a famous woman who always ( )<sup>29</sup> the bus home.
27. They started a ( )<sup>30</sup> which lasted for more than a week.
28. These ( )<sup>31</sup> the words which we will always remember.

The jMET in (2) is from Maki (2019), and contains grammar items to be learned in the 7th to the 9th grade in junior high school. The test taker is required to write a correct English word into each of the 31 blank spaces of the given sentences, while listening to a corresponding CD. It takes a few minutes to complete the jMET.

Next, the MET 60 is shown in (3). The text of the MET 60 is from Kawana and Walker (2002), which is a textbook designed for college freshmen.

### (3) The MET 60

The majority of people ( )<sup>1</sup> at least one pet at some time in their ( )<sup>2</sup>. Sometimes the relationship between a pet ( )<sup>3</sup> or cat and ( )<sup>4</sup> owner is so close that ( )<sup>5</sup> begin to resemble each other ( )<sup>6</sup> their appearance and behavior. On the other ( )<sup>7</sup>, owners of unusual pets such as tigers or snakes sometimes ( )<sup>8</sup> to protect themselves ( )<sup>9</sup> their own pets. Thirty years ago the ( )<sup>10</sup> of an inanimate ( )<sup>11</sup> first arose. This was the pet rock, which became ( )<sup>12</sup> craze in the United States and spread ( )<sup>13</sup> other countries as well. People ( )<sup>14</sup> large sums of money ( )<sup>15</sup> ordinary rocks and assigned ( )<sup>16</sup> names. They tied ( )<sup>17</sup> leash around the rock and pulled ( )<sup>18</sup> down the street just like a dog. The ( )<sup>19</sup> owners even talked ( )<sup>20</sup> their pet rocks. Now that ( )<sup>21</sup> have entered the computer age, ( )<sup>22</sup> have virtual pets. ( )<sup>23</sup> Japanese Tamagotchi---the imaginary chicken ( )<sup>24</sup>---

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was the precursor of many virtual ( )<sup>25</sup>. Now there are an ever-increasing number ( )<sup>26</sup> such virtual pets which mostly young people ( )<sup>27</sup> adopting as their own. And if ( )<sup>28</sup> virtual pet dies, you can reserve a permanent resting place ( )<sup>29</sup> the Internet in ( )<sup>30</sup> virtual pet cemetery.

Sports are big business. Whereas Babe Ruth, ( )<sup>31</sup> most famous athlete of ( )<sup>32</sup> day, was well-known ( )<sup>33</sup> earning as much as ( )<sup>34</sup> President of the United States, ( )<sup>35</sup> average salary of today's professional baseball players ( )<sup>36</sup> ten times that ( )<sup>37</sup> the President. And ( )<sup>38</sup> handful of sports superstars ( )<sup>39</sup> 100 times more through their contracts ( )<sup>40</sup> manufacturers of clothing, ( )<sup>41</sup>, and sports equipment. But every generation produces one or two legendary athletes ( )<sup>42</sup> rewrite the record books, and whose ability and achievements ( )<sup>43</sup> remembered for generations. ( )<sup>44</sup> the current generation Tiger Woods and Michael Jordan ( )<sup>45</sup> two such legendary figures, both of ( )<sup>46</sup> have achieved almost mythical status. The ( )<sup>47</sup> that a large number of professional athletes earn huge incomes has ( )<sup>48</sup> to increased competition throughout ( )<sup>49</sup> sports world. Parents ( )<sup>50</sup> their children to sports training camps at ( )<sup>51</sup> early age. Such ( )<sup>52</sup> typically practice three to four hours a ( )<sup>53</sup>, all weekend and during their school vacations in order to better their chances ( )<sup>54</sup> eventually obtaining a well-paid position on ( )<sup>55</sup> professional team when they ( )<sup>56</sup> up. As for ( )<sup>57</sup> many young aspirants ( )<sup>58</sup> do not succeed, one wonders if ( )<sup>59</sup> will regret having ( )<sup>60</sup> their childhood.

The test taker is required to write a correct English word into each of the 60 blank spaces of the given sentences, while listening to a corresponding CD. It takes a few minutes to complete the MET 60.

Third and finally, (4) is the basic form of the MET Online with 3 multiple choice questions.

(4) The Basic Form of the MET Online with 3 Multiple Choice Questions

Many people have 

experiment
experience
experienced

 the joy of 

stood
standing
stand

 on ...

The correct answers are marked with \* in (5).

(5) The Basic Form of the MET Online with 3 Multiple Choice Questions

Many people have 

experiment
experience
*experienced

 the joy of 

stood
*standing
stand

 on ...

The MET Online with 3 multiple choice questions does not let the participant type the target words in empty spaces. Instead, in the MET online with 3 multiple choice questions, three candidate words are lined up vertically at the target word position, and the participant selects the word s/he hears by clicking one of the candidate words. The number of questions is 103 for one of the two versions of the MET Online (MET Online 01 for short), and the number of questions is 105 for the other version of the MET Online (MET Online 02 for short). It takes about 3 minutes to complete each of the MET Online.

Note that the texts in the two versions of the MET Online are different from the one in the MET 60. Note also that the scores of the two versions of the MET Online are automatically graded, while the scores of the two paper-based versions of the MET are graded by the researcher(s).

### 3. Results

34 freshmen at a university in Japan participated in this study. In order to examine whether there are statistically significant correlations between the scores on the jMET/the MET 60 and the scores on the two versions of the MET Online with 3 multiple choice questions, we used a simple regression analysis. In the following discussion, we follow Yanai (1998) in interpreting values of correlation coefficients. She assumes the correspondence between correlation coefficients and their characteristics shown in (6).

#### (6) The Correspondence Between Correlation Coefficients and Their Characteristics

Correlation Coefficients	Characteristics
$0 \leq r <  .2 $	almost no correlation
$ .2  \leq r <  .4 $	weak correlation
$ .4  \leq r <  .7 $	moderate correlation
$ .7  \leq r <  .9 $	strong correlation
$ .9  \leq r <  1 $	extremely strong correlation

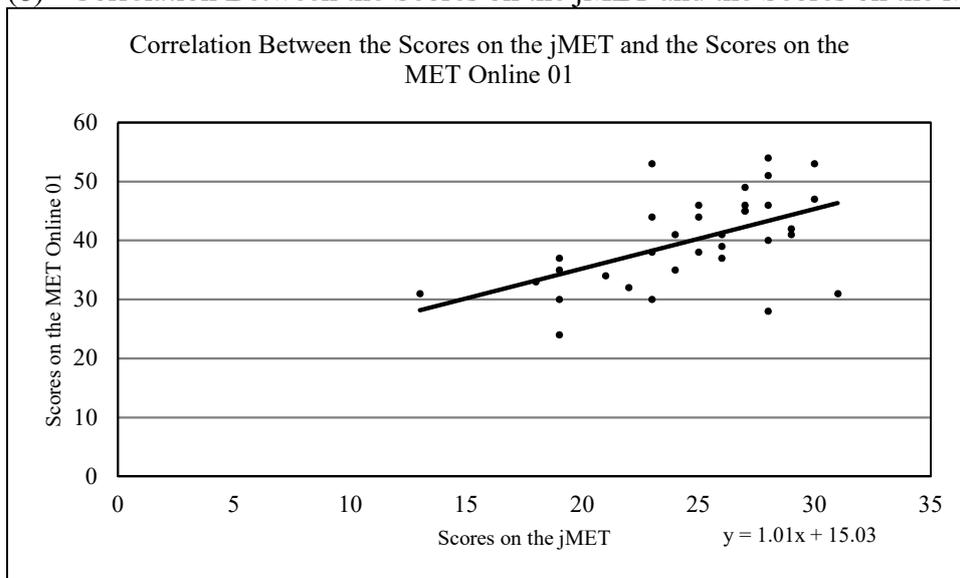
The results are shown in turn below. The significance level was set at  $\alpha=.05$  throughout this research. First, let us consider the correlation between the scores on the jMET and the scores on the MET Online 01.

- (7) Correlation Between the Scores on the jMET and the Scores on the MET Online 01  
 $n=34$   
 $r=.54$   
 $p<.01$

(7) shows a statistically significant correlation between the scores on the jMET and the scores on the MET Online 01, which is more clearly visualized by (8).

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(8) Correlation Between the Scores on the jMET and the Scores on the MET Online 01



Second, let us turn to the correlation between the scores on the MET 60 and the scores on the MET Online 01.

(9) Correlation Between the Scores on the MET 60 and the Scores on the MET Online 01

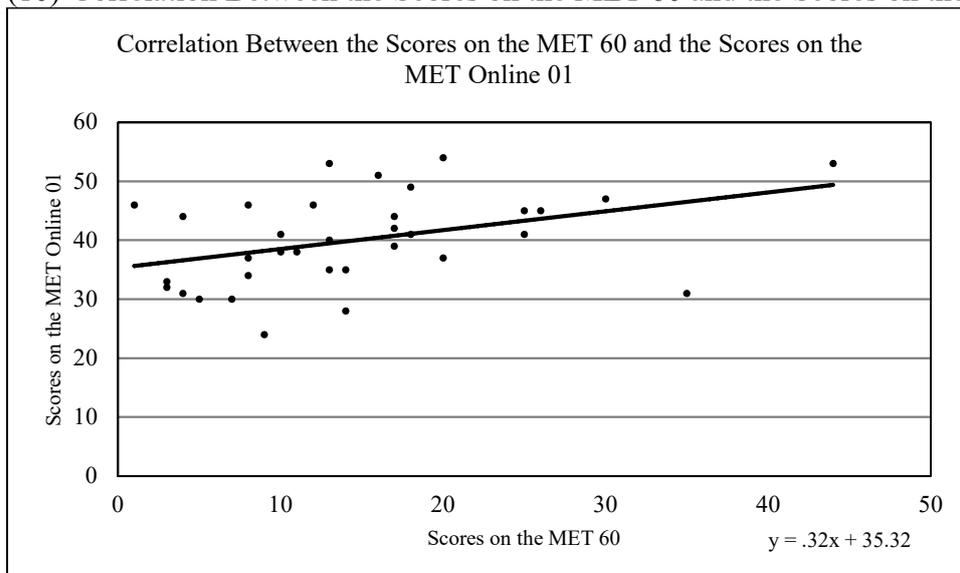
$$n=34$$

$$r=.40$$

$$p<.05$$

Again, (9) shows a statistically significant correlation between the scores on the MET 60 and the scores on the MET Online 01, which is more clearly visualized by (10).

(10) Correlation Between the Scores on the MET 60 and the Scores on the MET Online

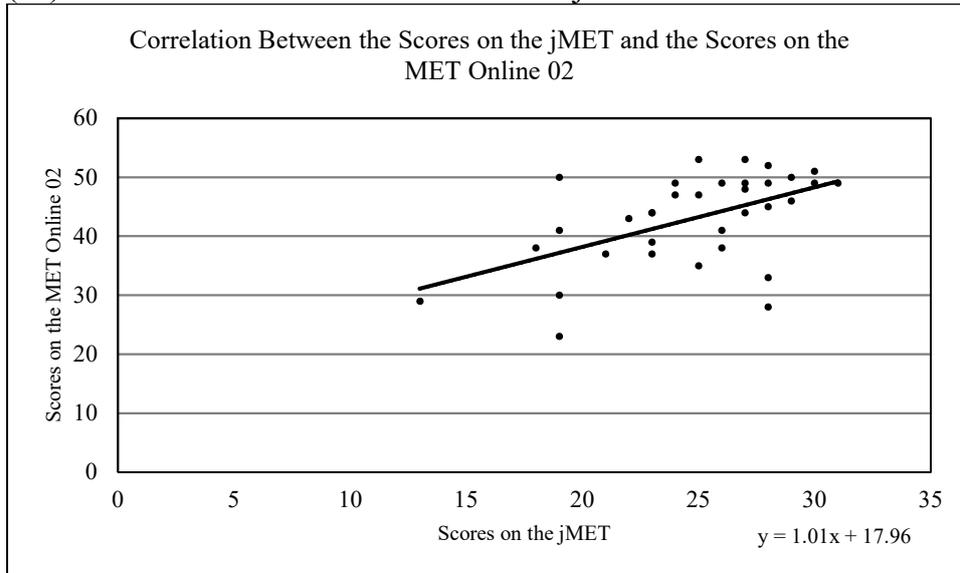


Third, let us consider the correlation between the scores on the jMET and the scores on the MET Online 02.

- (11) Correlation Between the Scores on the jMET and the Scores on the MET Online 02  
 $n=34$   
 $r=.53$   
 $p<.01$

(11) shows a statistically significant correlation between the scores on the jMET and the scores on the MET Online 02, which is more clearly visualized by (12).

- (12) Correlation Between the Scores on the jMET and the Scores on the MET Online 02



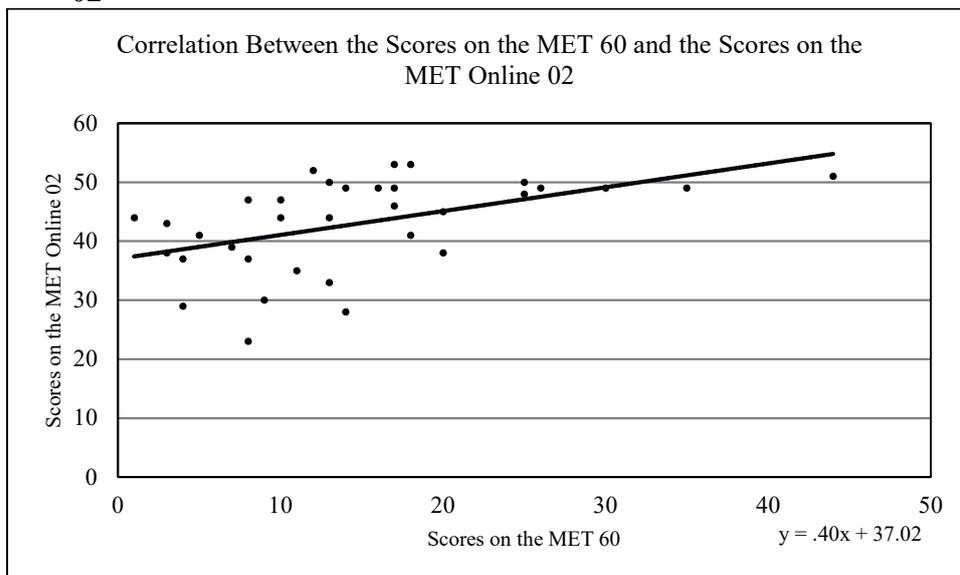
Finally, let us turn to the correlation between the scores on the MET 60 and the scores on the MET Online 02.

- (13) Correlation Between the Scores on the MET 60 and the Scores on the MET Online 02  
 $n=34$   
 $r=.49$   
 $p<.01$

Again, (13) shows a statistically significant correlation between the scores on the MET 60 and the scores on the MET Online 02, which is more clearly visualized by (14).

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(14) Correlation Between the Scores on the MET 60 and the Scores on the MET Online 02



#### 4. Discussion

We started this paper with hypothesis (1).

(1) Hypothesis

There will be statistically significant correlations between the scores on the two paper-based versions of the MET (the jMET and the MET 60) and the scores on the two versions of the MET Online with 3 multiple choice questions.

The results of this study clearly indicate that there were statistically significant correlations between the scores on the jMET/the MET 60 and the scores on the two versions of the MET Online with 3 multiple choice questions. Therefore, hypothesis (1) was confirmed.

The present study, coupled with Maki et al.'s (2022) study with the MET Online with two choice questions, provides support to the claim that paper-based versions of the MET and online-based versions of the MET share the same sort of function, so that the online-based versions of the MET will be able to predict the scores on more comprehensive English proficiency tests. This is because the Maki Group showed that the scores on the paper-based versions of the MET had predicted the scores on the English Section of the Center Tests for the past 17 years up to 2019.

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